

REMARKS

The present application has been carefully studied and amended in view of the outstanding Office Action dated August 22, 2003, and reconsideration of the rejection of claims 1-3, 5 and 6 is requested in view of the following comments.

Claims 8-12 have been cancelled, and the issues concerning these claims are therefore rendered moot. Claims 1-7 remain, and the Examiner has indicated that claims 4 and 7 are directed to allowable subject matter. Accordingly, the only issue which remains concerns the patentability of claims 1-3, 5 and 6.

Applicant respectfully submits that the subject matter of claims 1-3, 5 and 6 is not disclosed or suggested by the prior art taken alone or in combination with one another. Specifically, these claims are not anticipated by Lassalle US 4,894,424, for the following reasons.

The process of ethylene polymerization disclosed by Lassalle produces polymers with a particle size outside the scope of rejected claims 1-3, 5 and 6. The Lassalle polymer with the smallest average particle size (Example 12 of Table I of Lassalle) comprises 18 weight-% of particles with a size of > 630 microns, 68.5 weight-% of particles with a size of > 160 microns, and 86.5 weight-% of particles with a size of > 125 microns. Assuming a symmetrical particle size distribution, from the above set of particle size data the average particle size can be calculated employing a method disclosed in the German norm DIN 66145. Said norm encompasses plotting, on a double logarithmic scale, the sieve size, i.e. the minimum particle size of a sieve fraction being retained on the sieve versus the relative content by weight of said sieve fraction. The average particle size of the polymer of

Example 12 thus amounts to approximately 340 microns (cf. enclosed graph) which is outside the scope of claims 1-3, 5 and 6. Accordingly, the subject matter of these claims 1-7 is novel and unsuggested by the prior art, particularly Lassalle.

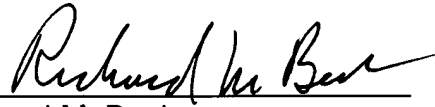
The enclosed graph shows the analysis of the average particle size of the coarsest polymer of Table I of Lassalle (Example 7) which amounts to 640 microns. The catalysts disclosed by Lassalle are particularly suitable for a process of ethylene polymerization in the gas phase. In a gas phase polymerization process relatively coarse catalyst particles must be employed to enhance the stability of the fluid reaction bed (cf. column 1, line 62 – column 2, line 6 of Lassalle). Hence, it is meaningful that the catalysts and the resulting polymers produced by the teachings of Lassalle are coarser than the catalysts and the polymers of present invention recited in claims 1-3, 5 and 6.

Regarding the product-by process limitations of the catalyst, the claims of present application concern the reaction of Ti(IV) with aluminum compound at from 20 to 50 °C for from 0.5 minute to 60 minutes (to form Ti(III); cf. page 4, lines 31-35 of the specification). In distinct contrast, the cited example of Lassalle comprises the reaction of already formed and water treated Ti(III) catalyst solid (B) with a cocatalyst (trioctylaluminum) at 80 °C. With regard to these process limitations, Lassalle and the subject matter of claims 1-3, 5 and 6 relate to completely different process steps. Hence, claims 1-3, 5 and 6 of the present application are thus outside of the scope of the teachings of Lassalle.

Accordingly, for the reasons expressed above, it is believed that claims 1-3, 5 and 6 are also directed to patentable subject matter in addition to claims 1 and 7, and notice to that effect is respectfully requested.

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